Flight-Testing Newton's Laws			
2005 Science			
Curriculum Standards			
South Carolina Science			
Grades 9-12 (High School Physical Science)			
Activity/Lesson	**State**	**Standards**	
Session-10 (1-5)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-10 (1-5)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-10 (1-5)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-10 (1-5)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-1 (1-17)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-1 (1-17)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-1 (1-17)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-1 (1-17)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-2 (1-10)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-2 (1-10)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-2 (1-10)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-3 (1-6)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-3 (1-6)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-3 (1-6)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-3 (1-6)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-4 (1-11)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-5 (1-6)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-5 (1-6)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.

Session-5 (1-6)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-5 (1-6)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-6 (1-8)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-6 (1-8)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-6 (1-8)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-6 (1-8)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-7 (1-5)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-7 (1-5)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-7 (1-5)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-7 (1-5)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-8 (1-9)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-8 (1-9)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-8 (1-9)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-8 (1-9)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
Session-9 (1-7)	SC	SCI.9-12.PS-5.3	Explain how changes in velocity and time affect the acceleration of an object.
Session-9 (1-7)	SC	SCI.9-12.PS-5.5	Explain how acceleration due to gravity affects the velocity of an object as it falls.
Session-9 (1-7)	SC	SCI.9-12.PS-5.7	Explain the motion of objects on the basis of Newton's three laws of motion: inertia; the relationship among force, mass, and acceleration; and action and reaction forces.
Session-9 (1-7)	SC	SCI.9-12.PS-5.8	Use the formula F = ma to solve problems related to force.
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South Carolina Science			
Grades 9-12 (High School Physics)			

Activity/Lesson	State	Standards	
Session-10 (1-5)	SC	SCI.9-12.P-2.2	Apply formulas for velocity or speed and acceleration to one and two-dimensional problems.
Session-10 (1-5)	SC	SCI.9-12.P-2.3	Interpret the velocity or speed and acceleration of one and two-dimensional motion on distance-time, velocity-time or speed-time, and acceleration-time graphs.
Session-10 (1-5)	SC	SCI.9-12.P-2.4	Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and reaction forces.
Session-10 (1-5)	SC	SCI.9-12.P-2.10	Explain the relationships among speed, velocity, acceleration, and force in rotational systems.
Session-1 (1-17)	SC	SCI.9-12.P-2.2	Apply formulas for velocity or speed and acceleration to one and two-dimensional problems.
Session-1 (1-17)	SC	SCI.9-12.P-2.3	Interpret the velocity or speed and acceleration of one and two-dimensional motion on distance-time, velocity-time or speed-time, and acceleration-time graphs.
Session-1 (1-17)	SC	SCI.9-12.P-2.4	Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and reaction forces.
Session-1 (1-17)	SC	SCI.9-12.P-2.10	Explain the relationships among speed, velocity, acceleration, and force in rotational systems.
Session-2 (1-10)	SC	SCI.9-12.P-2.2	Apply formulas for velocity or speed and acceleration to one and two-dimensional problems.
Session-2 (1-10)	SC	SCI.9-12.P-2.4	Interpret the resulting motion of objects by applying Newton's three laws of motion: inertia; the relationship among net force, mass, and acceleration (using F = ma); and action and reaction forces.
Session-2 (1-10)	SC	SCI.9-12.P-2.5	Explain the factors that influence the dynamics of falling objects and projectiles.
Session-2 (1-10)	SC	SCI.9-12.P-2.10	Explain the relationships among speed, velocity, acceleration, and force in rotational systems.
Session-3 (1-6)	SC	SCI.9-12.P-2.2	Apply formulas for velocity or speed and acceleration to one and two-dimensional problems.
Session-3 (1-6)	SC	SCI.9-12.P-2.3	Interpret the velocity or speed and acceleration of one and two-dimensional motion on distance-time, velocity-time or speed-time, and acceleration-time graphs.

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